Observing Services

Vision

The mission of the NWS Observing Services is to set policy, develop procedures, and articulate requirements for the maintenance and enhancement of in situ and remote environmental monitoring.

Concept of Operations

The Cooperative Observer Network and the Radiosonde Network are in the process of being modernized.

These modernization activities include replacement of the current 91 station upper air network, and enhancement of 8,000 cooperative observing stations over the remainder of the decade. As part of a demonstration pilot in New England about 400 stations are scheduled to be modernized.

The Modernization of NWS sponsored observing programs will integrate new technologies and science, while building stronger relationships with NOAA's public and private sector partners.

Customer and Partner Requirements

Customers and partners requirments include continued support for:

- Real time access to ASOS data
- Access to Mesonet data
- Real time access to COOP data
- Access to high resolution data

GPRA Goals and Performance Measures:

The Observing Services performance measures concentrate on increasing the number and quality of observations customers can obtain from NOAA. Increasing observations is vital to NOAA's ability to maximize the benefits of its products and services in terms of improving the Nation's environment, public safety and economy.

Program	FY04 # of Observing Sites
COOP Modernization	200-400 modernized sites
RRS	20 sites

Science and Technology Requirements

- Data assimilation
- Ocean/Atmosphere model resolution and Mesoscale physics
- Coupling of mesoscale Ocean/Atmosphere NWP Models
- Expand targeted observations

Product & Service Changes

- Modernize up to 400 COOP sites
- Deploy 20 Radiosonde Replacement System (RRS) sites
- Distribute new metadata system software
- Implement new instruction for conducting data continuity
- Implement new COOP handbooks

Milestones by Quarter FY04

1st Quarter

- Publish final Operations Training Guide for commissioning of Radiosonde Replacement System (RRS)
- Finalize Design for metadata system
- Validate Radiosonde Work Station (RWS) Software algorithms and provide support to problem resolution for Build 2 activities
- Begin the data continuity studies for the Automated Surface Observing System replacement Ice-Free Wind sensor, Dew Point sensor, and All Weather Precipitation Accumulation Gauge

- Implement use of FAA Order 7900.5b, Surface Weather Observing at NWS observing locations
- Participate in WMO on Upper Air and Capacity Building committees
- Ensure requirements solutions in place at New England modernized COOP Beta sites

2nd Quarter

- Coordinate Upper Air BUFR Code Tables uniformity issues with WMO Open Area Program Group (OPAG) on Upper Air and with WMO Commission on Basic Services (CBS) codes group on FM32 and FM35
- Provide and validate RWS thermodynamic and wind processing software algorithms, data quality assessment procedures, data coding issues, and provide support to problem resolution for system integration testing
- Implement modernized metadata system
- Provide input to 10 year plan supporting the Integrated Earth Observing System

3rd Quarter

- Complete Memorandum Of Agreement with Federal Aviation Adiministration on transition of aviation weather observation support activities
- Complete installation of New England Cooperative Observer Demonstration Project
- Pursue implementation of real time data collection capability of high resolution ASOS data

4th Quarter

- Continue transfer of aviation observing functions to FAA
- Expand use of non government Mesonet data

Integrated Requirements to WFOs and RFCs

- Graphic User Interface for Quality Control in OB2
- LDAD capability to ingest mesonet data

Link to Science and Technology Infusion Plan

The future for observing services includes:

- Air quality sensors
- Boundary layer profilers
- Advancements in communications
- More detailed meteorological reports from aircraft
- Increased capacity of satellite reports
- Improved GPS Radiosonde Measurements
- Global Position System

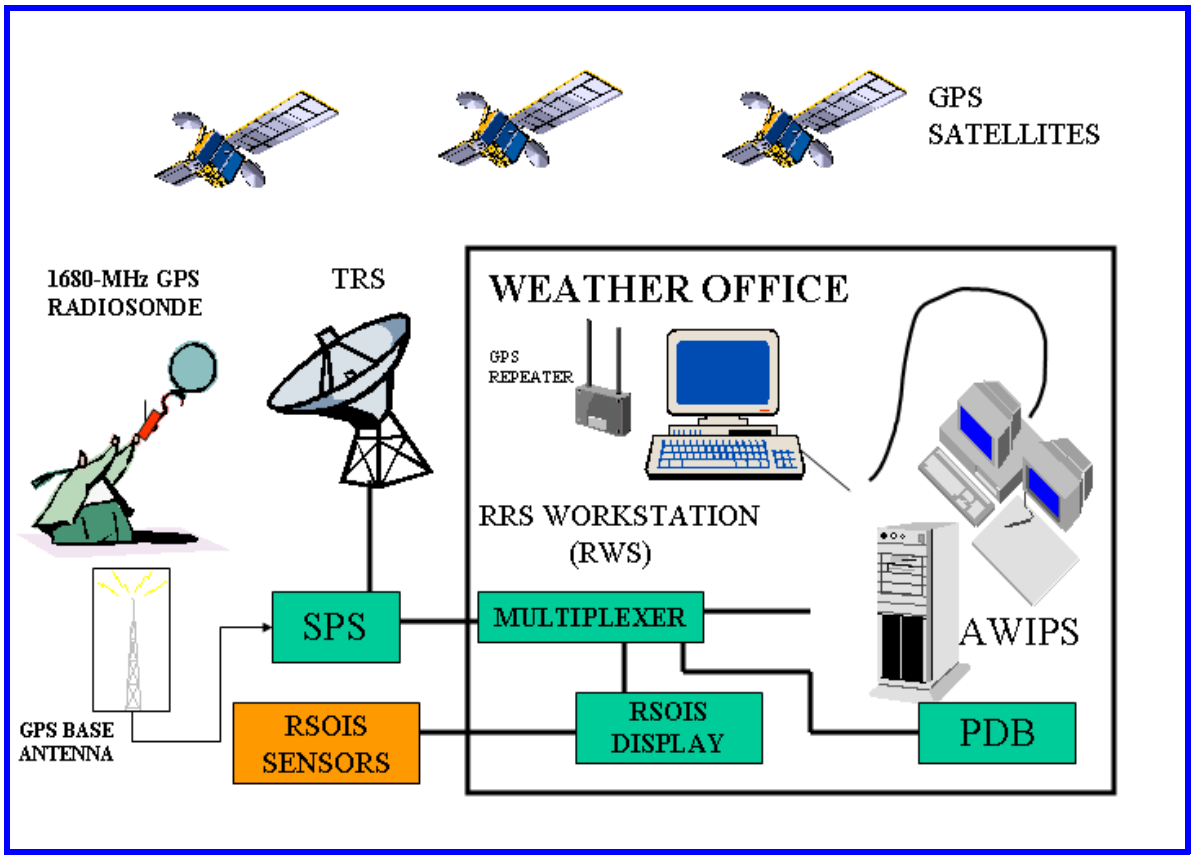
Radiosonde Replacement System's 1680 MHz Telemetry Receiving System (TRS).

Training

- Updates to COOP and DATAC classes at NWSTC
- Training for WFO staff on Fischer Porter upgrade
- Continue to support MDCRS on-line training activities

Outreach

- International, Federal, State, and private sector partners
- NOAA Climate Monitoring Working Group
- Climate Reference Network Advisory Panel
- Western Governor's Drought Advisory Council
- WMO Committees on Integrated Meteorological Observations and Codes and Commission on Basic Services
- Annual Meeting of the Association of State climatologists
- Partners meetings on COOP modernization and site selection teams.
- Oshkosh Air show
- NBAA convention
- Air Transport Association Meetings
- Aircraft Owners and pilots association meetings and conventions
- WMO Expert on Upper Air Systems Intercomparisons
- Annual American Meterological Society Conference
- WMO Technical Conference
- NOAA Observing Systems Council
- ESDIM Funding Committee



Components of the Radiosonde Replacement System

- Satellite Telecommunications Interagency Working Group
- Earth Observation System
- Weather Information Surface Transportation

Dissemination

- Work toward developing and implementing Internet access to high resolution data sets
- Continue to work with the Forecast Systems Laboratory in providing data collection capabilities
- Provide improved interim data assimilation for COOP data. Secure National support for the Central Region WxCoder II and Southern Region IV ROC data assimilation solutions

Verification

Observing Service will coordinate the process of using COOP data sites for temperature forecast verification.

Regional Initiatives

The Regions are assisting with the deployment of Fischer & Porter rain gauge upgrade, and are actively supporting SMS implementation by providing input and support through requirements review and documentation development.

The regions are developing two methods for automating the transmission of data from COOP stations. They are as follows:

Central Region:

WXCODR II - Provides for web based entry and dissemination of WS form B-91.

Support annual Experimental Aircraft Association Fly-in at Oshkosh, Wisconsin with the goal of fostering both aviation and observational services outreach.

Southern Region:

IV ROC - Provides a telephonic system to collect and disseminate COOP observations.

Eastern Region:

The Eastern Region is leading the effort in establishing and operating the COOP New England Demonstration Pilot.

Contact Information

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